

REMARKS

Claims 1-53 are pending and under consideration.

The rejections under 35 U.S.C. §§102 and 103 are respectfully traversed.

Independent claim 1 recites that the metal wiring layers externally radiate some of the heat generated from the heaters. Present FIG. 4 illustrates this feature, as an example.

In contrast, Cornell discloses a resistive material 44, relied upon by the Examiner as corresponding to the claimed metal wiring layer. However, the resistive material 44 does not radiate heat externally. Instead, the resistive material 44 receives an electric current from the conductive layer 46 and then radiates the heat within the channel which receives the ink. FIG. 3A of the reference illustrates a chip 13 having a repeating structure which includes MOSFET 25, heater 1 and the resistive material 44. This repeating structure is shown in greater detail in FIGS. 4 and 5. As shown in FIG. 5, the resistive material 44 extends to the outer boundary of the repeating structure. Since the repeating structure is disposed in the open ink channel 31, the heat transmitted by the resistive material 44 is radiated into the ink, not externally as claimed. Cornell, FIG. 3a.

Dependent claim 2 recites heat radiating parts to which the metal wiring layers are connected. Initially, it is noted that Cornell does not discuss heat radiating parts. The Examiner relies upon the heater 1 of Cornell as corresponding to this feature. However, the heater 1 of this reference already corresponds to the claimed heater. It is respectfully submitted that the same element cannot serve as the heater which heats the ink and the heat radiating part. This is especially apparent in light of claim 5, which recites that the heat generated from the heating parts pre-heats the ink. This is in contrast with the heaters 1 of Cornell, which do not heat pre-heated ink. Thus, the claimed arrangement of

Silverbrook does not overcome these deficiencies in Cornell, and is not relied on by the Examiner to do so. The above arguments may be selectively applied to the remaining independent claims.

Furthermore, independent claim 12 recites wiring layers which apply a signal to the plurality of MOSFETs. In contrast, the conductive layers 46 of Cornell receive an electric current to drive heater 1. Cornell, col. 5, ln. 16. However, there is no disclosure that this current is a signal.

Accordingly, withdrawal of the rejections is requested.

There being no further outstanding objections or rejections, it is submitted that the

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application is in condition for allowance. An early action to that effect is courteously solicited.

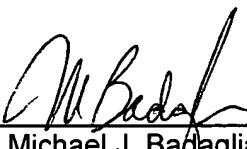
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 11-14-05

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